

suggestions which are incompatible with the moral sense of the subject are in most cases at once rejected. Nevertheless, it must be admitted that if it is possible by means of hypnosis to suggest crime to a person whose moral sense is defective, then this is a factor which might become of vast importance if hypnotic suggestion ever became a remedy of general use.

The author gives an interesting chapter on "suggestive therapeutics," and in it he shows the power of suggestion of one mind upon another, and even in the same person the influence of the conscious mind upon the subconscious. He believes that Christian science is largely a system of auto-suggestion.

Dr. Ash strongly urges that there should be introduced into the medical curriculum a compulsory course of psychology and lectures on the principles of "suggestive therapeutics." We cordially agree with the former recommendation, for it is lamentable to find the ignorance that still exists regarding the normal mind, and some knowledge of this subject is a matter of growing importance, both from the evolutionary and dissolutionary standpoints.

For those who wish to learn some of the practical points regarding hypnosis and suggestion, Dr. Ash's book will be found most helpful, for although it is small it contains much information.

Domaine de Tervueren—Arboretum—Types de Forêts des Régions tempérées représentés dans leur Composition caractéristique. By Ch. Bommer. Pp. 211. (Brussels: Imprimerie F. and L. Terneu, 1905.)

THE site of the above arboretum was generously given by the King of the Belgians to the people. At the time of the gift His Majesty expressed the opinion that it was very useful, not to say indispensable, to create or to preserve open spaces with natural decoration near large towns, both from an æsthetic and hygienic point of view. M. Ch. Bommer was entrusted with the task of laying out the arboretum, and this he has evidently done in a scientific and practical manner. The various plots or groups have been formed to illustrate the principal types of vegetation in the temperate zone of the old and new worlds. Even the bushes and herbaceous plants characteristic of these zones have been added to complete the picture, thus very clearly illustrating the characteristics of the various species and their geographical distribution. The arboretum also forms an excellent centre for testing the acclimatisation of exotic trees. We have also in the above book a detailed account of the individual species which includes synonyms, size, habit, general characteristics, and uses of wood, &c. Numerous photographic plates are included illustrating various groups and points of general interest. Plans of the arboretum and maps showing the geographical distribution of the species are given at the end of this very useful and interesting book.

Elementary Science for Pupil Teachers. Physics Section by W. T. Clough. Chemistry Section by A. E. Dunstan. Pp. vi+183. (London: Methuen and Co., 1907.) Price 2s.

PUPIL teachers who have opportunities of doing practical work will, if they perform the experiments in this book and follow the guidance it gives, obtain sound preliminary ideas of physics and chemistry. The physics section comprises the measurement of lengths, areas, volumes, and masses, simple hydrostatics, and an introduction to the study of heat.

The chemistry section covers the subjects arising from a careful study of air, water, and other common substances. The volume is on the whole attractive, but the smaller of the two types is likely to try the eyes of readers.

A First Geometry. By W. M. Baker and A. A. Bourne. Pp. viii+128+vi. (London: George Bell and Sons, 1907.) Price 1s. 6d.

WITH the exception of a dozen theorems at the end, this book is a simple course of experimental geometry designed to familiarise young pupils with fundamental geometrical conceptions by setting them to draw with mathematical instruments and to construct simple models for measuring angles and constructing plans. The lessons are interesting, and arranged in a manner that shows the authors to be well acquainted with the needs and capabilities of beginners.

LETTERS TO THE EDITOR.

[The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts intended for this or any other part of NATURE. No notice is taken of anonymous communications.]

Radium and Geology.

PROF. JOLY's interesting discovery (NATURE, May 2, p. 8) that typical rocks in the Simplon Tunnel contain quantities of radium considerably in excess of the average of igneous rocks raises a question. From Mr. Strutt's investigations it appears that the average content of igneous rocks would be sufficient to account for the ordinary temperature gradient in the earth's crust were it due to radium. It seems, therefore, that, if the temperature was so caused, the gradient in the Simplon Tunnel ought to have been higher than the average, viz. 1° F. for between 50 feet and 60 feet. But, in fact, as beneath other mountains, it was considerably lower. In NATURE, October 27, 1904, it is stated that the temperature of the rocks in the advanced gallery was 108° F. where the cover was 7005 feet. This gives 1° F. for 92 feet. In the St. Gothard Tunnel it was 1° F. for 102 feet, and in the Mt. Cenis Tunnel 1° F. for 100 feet. That the gradient in the Simplon Tunnel, though low, was somewhat higher than in the other two was probably caused by the spring 23° hotter than the rock, which brought up heat from a lower level. I think I have shown in my "Physics of the Earth's Crust," chapter xvi., that these low gradients can but very slightly be attributed to the convexity of the surface.

Is not, therefore, the result of Prof. Joly's examination of the Simplon rocks rather unfavourable than otherwise to the hypothesis that the heat of the earth's crust is due to radium?

O. FISHER.

Graveley, Huntingdon, May 4.

Ethnological Notes on the Aboriginal Tribes of New South Wales and Victoria.

A REVIEW of the above work appeared in NATURE of May 31, 1906 (vol. lxxiv., p. 100), to which I wish to reply briefly. The review opens by saying that my works "have either been ignored or dismissed in a footnote by experts such as Dr. Howitt and Prof. Spencer." Whilst the reviewer was quite aware of the obscure "footnote," he was quite silent regarding my reply to it, dated June 27, 1905.¹ The opinions of the two men named do not perturb me, but when such an injurious statement appears in the "thunderer" of scientific journalism, I crave fair play and the right of reply.

¹ The Queensland Geographical Journal, vol. xx., pp. 73-75.

For nearly forty years I have practised as a land surveyor in Australia, and through my professional duties I have been much in contact with the aborigines over all the eastern half of this continent. In my youth I became fascinated with the study of local ethnology, and my enthusiasm has never flagged since, so that I can claim to be no tyro in the science. Having had exceptional opportunities of studying my subject on the spot, I claim a little consideration. More than one hundred of my contributions have already been published by various scientific societies in Australia, England, France, Prussia, Austria, and the United States, so that my work has met with some appreciation. I mention these few facts about myself, not egotistically, but as *bona fides*, because Australia is so far removed from the centre of scientific civilisation that a quiet worker is apt to be overlooked unless he presents his credentials.

Now, as regards the "ignoring" referred to by the reviewer. Dr. Howitt does not mention me in his book published in 1904, but he reports, at p. 92, the names Kulpuru and Tiniwa as phratries of the Yantrawanta tribe. He omits to say, in fine he "ignores," that I reported these same phratry names in 1899,¹ and again in 1900.² At p. 138 he says that "Tiniwa is the same as Kararu and Kulpuru as Matteri," but he "ignores" that I reported this self-same equivalence in 1900.³ At p. 107 he stumbled across the word Mukulu (my muggulu), which he mistook for a phratry name instead of a blood division, a thing he had apparently never heard of. At p. 211, in speaking of the Wiradjuri sociology, he says that Ippai can marry Matha as well as Kubbita, but he "ignores" my report to the same effect in 1896, eight years before.⁴

Then again, in his account of the Dora ceremony (my Toara or Doara), at pp. 599-606, Dr. Howitt "ignores" that I described that rite in January, 1900.⁵ If he did not avail himself of my work, which appeared four years earlier than his, then there is a wondrous agreement in our details.

And yet again, Dr. Howitt at p. 44 gives a sketch-map showing the habitat of certain tribes in South Australia, but he "ignores" that I published substantially the same map in 1900,⁶ four years earlier. In comparing the two maps and the explanatory letterpress accompanying mine we observe a marvellous coincidence. Many other examples could be cited, but exigencies of space force us to pass them over for the present.

I do not particularly object to all the above instances of "ignoring," because they have the effect of confirming the accuracy of my earlier reports; my objection applies to the damaging way in which reference is made to them in NATURE.

Regarding Prof. Spencer's "footnote," I refer your readers to my reply thereto in the Queensland Geographical Journal, vol. xx., pp. 73-5. No doubt he was very much cut to find that I had forestalled him by describing the eight sections of the Wombaia (his Umbaia) tribe in 1898;⁷ that I had dealt with the Binbingha sociology in 1899;⁸ and that I had reported the sociology of the Chingalee in 1900,⁹ with a comprehensive map showing the location of these and other tribes. The publication in 1901 of my "Ethnological Notes on the Aboriginal Tribes of the Northern Territory"¹⁰ probably increased his irritation and disappointment.

Fault is found in the review with my statement that nothing important has been added to our knowledge of the Kamilaroi organisation since the time of Ridley and Bridgeman. I beg to repeat that Ridley showed that Ippai married Kubbita or Ippatha, and that there were totems with female descent. He also gave many illustra-

tions of the intermarriages of the four divisions. Bridgeman stated that certain pairs of sections had a phratry name as well. I am still of opinion that nothing new or important had since been added by anyone until I reported the Blood and Shade divisions. The reviewer mentions Dr. Howitt's book, but his work is merely confirmatory of the previous reports of Ridley and Bridgeman.

It is stated in the review that Mrs. Langloh Parker's phratry names are identical with my Blood divisions; such is not the case, because she mistook the names of the Blood divisions for the phratries. I have known the Yualei (Mrs. Parker's Euahlayi) tribe for many years, and have been through most of their country. When publishing a grammar and vocabulary of their language in 1902,¹ I stated that their social organisation and initiation ceremonies are the same as those of the Kamilaroi, thus anticipating much of Mrs. Parker's book, which did not appear until 1905.

Much more could be added, but it is thought that enough instances have been given to show that in original research among the Australian blacks I have often been first in the field; that probably my published results have been used and "ignored" by others; and, above all, that my work will stand the most rigorous criticism.

I have explained to the editor of NATURE the cause of the delay in my replying to the review in question.

R. H. MATHEWS.

If I have done Mr. Mathews an injustice in my notice of his book, I can only express my regret for it and offer such reparation as a statement of my present view of the matter may make.

In directing attention to the fact that Mr. Mathews is ignored by Dr. Howitt and Prof. Baldwin Spencer, I merely stated a fact; if I had seen his reply I would have mentioned it. As to the reason why he is ignored, I know nothing; a closer examination of Mr. Mathews's contributions than I had at the time of writing the notice been able to make leads me to think much better of his work; his readiness to acknowledge and withdraw his errors is worthy of the highest praise; and if his work is ignored solely on the ground that it is untrustworthy, it seems to me that this readiness is a sufficient reply to his critics. If there are further reasons, it is for Mr. Mathews's fellow-workers in Australia to state what they are. I personally have never heard of any further reason, and it seems to me that we in England are entitled to have one, if one exists. I may add that in my recent work, "Kinship and Marriage in Australia," I quoted Mr. Mathews as freely as any other author; at the same time, I have expressed dissent from some of his inferences.

Mr. Mathews makes good in the foregoing remarks his claim to priority on many points. His discovery of the "blood" divisions, of which Dr. Howitt knows nothing, seems to me especially important. In order to realise exactly what the situation is, we need a complete genealogy of a tribe for several generations back, showing both phratry, class, blood, and totem names of each individual. If Mr. Mathews can provide this material we shall owe him much; failing that, I hope it may be possible for some trained anthropologist, familiar with the modern genealogical method, to investigate the matter. I may add that Mr. Mathews has invited me to verify in person all the statements in his works which he bases on his own observations; this in reply to the review which called forth the above protest is surely a guarantee of good faith. I much regret that no money is forthcoming in England for anthropological work; if the financial part of the business could be settled, I would gladly accept Mr. Mathews's offer.

Nothing was further from my mind than to hurt Mr. Mathews's feelings, and if my notice was somewhat sharp in tone, I must plead in excuse the somewhat emphatic self-assertion of the passages I quoted. I hope that any future criticisms of mine will be such as to call for no protest on Mr. Mathews's part.

NORTHCOTE W. THOMAS.

¹ Journ. Roy. Soc. N.S.Wales, xxxvii., pp. 137-190.

¹ Journ. Roy. Soc. N.S.Wales, xxxiii., 103; Proc. Amer. Philos. Soc., Philadelphia, xxxviii., 79.

² Proc. Amer. Philos. Soc., xxxix., 83.

³ *Op. cit.*, p. 84.

⁴ American Anthropologist, ix. (1896), 413; Journ. Roy. Soc. N.S.Wales, xxxi., 173-174.

⁵ American Anthropologist (1900), ii., New Series, 139-144.

⁶ Proc. Amer. Philos. Soc., xxxix., 92-93.

⁷ Journ. Roy. Soc. N.S.Wales, xxii., 75; Proc. Amer. Philos. Soc., xxxvii., 152.

⁸ Proc. Amer. Philos. Soc., xxxviii., 77.

⁹ American Anthropologist, ii., New Series, 495, with map.

¹⁰ Queensland Geographical Journal (1901), xvi., 69-90.